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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,785

12/08/2003

Yasuto Sakai

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07/06/2005

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,785

Applicant(s)

SAKAI ET AL.

Examiner

Anh T.N. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/08/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

CLAIM REJECTIONS

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 USC 102 (a) as being anticipated by Miyazawa (JP Pat. 2002-103643).

Miyazawa discloses in Figures 1-3 an ink cartridge comprising:

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- a liquid accommodating section (2) for containing a liquid;
- a liquid supplying part (5) , which communicates with said liquid accommodating section (2) , said liquid supplying part (5) including an opening (22) into which the liquid supplying needle (20) of the liquid ejecting apparatus is inserted; and
- an atmospheric valve (13, 14) for sealing a communicating hole (12) which allows said liquid accommodating section (2) to communicate with atmosphere, said atmospheric valve (13, 14) moving substantially in a direction parallel to a direction in which the liquid supplying needle (20) is inserted into said opening (22) of said liquid supplying part (5).

Claim 1 is rejected under 35 USC 102 (e) as being anticipated by Inoue et al. (US Pat. 6,773,099).

Inoue et al disclose in Figures 2-4C a liquid container comprising:

- a liquid accommodating section (S) for containing a liquid;
- a liquid supplying part (15, 17), which communicates with said liquid accommodating section (S), said liquid supplying part (15, 17) including an opening into which the liquid supplying needle (21) of the liquid ejecting apparatus is inserted; and
- an atmospheric valve (30) for sealing a communicating hole (22) which allows said liquid accommodating section (S) to communicate with atmosphere, said atmospheric valve (30) moving substantially in a direction parallel to a direction in which the liquid supplying needle (21) is inserted into said opening (15) of said liquid supplying part (S) (Figures 2-3B);

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-11 are rejected under 35 USC 103 (a) as being unpatentable over by Miyazawa (JP Pat. 2002-103643) in view of Seino et al. (US Pat. 6,863,388).

Miyazawa discloses the basic features of the claimed invention were stated above but does not disclose a liquid cartridge comprising a seal film for blocking between said liquid accommodating section and said communicating hole, and a tearing means for tearing said seal film when said liquid cartridge is mounted on said liquid ejecting apparatus and an attaching part on which a memory is attached, of which a side face is positioned by the liquid ejecting apparatus.

Seino et al. disclose in Figures 2A-3 and 6A-6B an ink cartridge comprising:

- a seal film (22) for blocking between said liquid accommodating section (4) and said communicating hole (17), and a tearing means (40) for tearing said seal film (22) when said liquid cartridge (1) is mounted on said liquid ejecting apparatus (33); and
- an attaching part on which a memory is attached, of which a side face is positioned by the liquid ejecting apparatus.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Seino in the Miyazawa ink cartridge for the purpose of opening an ink chamber (4) to the air and storing information.

Claims 10-11 are rejected under 35 USC 103 (a) as being unpatentable over by Inoue et al. (US Pat. 6,773,099) in view of Seino et al. (US Pat. 6,863,388).

Inoue et al. disclose the basic features of the claimed invention were stated above but does not disclose a liquid cartridge comprising a seal film for blocking between said liquid

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accommodating section and said communicating hole, and a tearing means for tearing said seal film when said liquid cartridge is mounted on said liquid ejecting apparatus and an attaching part on which a memory is attached, of which a side face is positioned by the liquid ejecting apparatus.

Seino et al. disclose in Figures 6A-6B an ink cartridge comprising:

- a seal film (22) for blocking between said liquid accommodating section (4) and said communicating hole (17), and a tearing means (40) for tearing said seal film (22) when said liquid cartridge (1) is mounted on said liquid ejecting apparatus (33); and
- an attaching part (6) on which a memory (12) is attached, of which a side face is positioned by the liquid ejecting apparatus (33).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Seino in the Inoue et al. liquid container for the purpose of opening an ink chamber (4) to the air and storing information.

Claim 19 is rejected under 35 USC 103 (a) as being unpatentable over by Miyazawa (JP Pat. 2002-103643) in view of Pollacek et al. (US Pat. 5,040,002).

Miyazawa discloses the basic features of the claimed invention were stated above but does not disclose a liquid cartridge comprising a check valve, which is provided between said liquid accommodating section and said communicating hole, for allowing atmosphere to flow from said communicating hole to said liquid accommodating section, and for inhibiting a liquid flowing from said liquid accommodating section to said communicating hole.

Pollacek et al. disclose in Figure 1 an ink cartridge comprising a check valve (38), which is provided between said liquid accommodating section (22) and said communicating hole (32, 42), for allowing atmosphere to flow from said communicating hole to said liquid

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accommodating section, and for inhibiting a liquid flowing from said liquid accommodating section (22) to said communicating hole (32, 42).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Pollacek et al. in the Miyazawa ink cartridge for the purpose of regulating the underpressure in an ink reservoir to prevent leakage of ink from a print head.

Claim 19 is rejected under 35 USC 103 (a) as being unpatentable over by Inoue et al. (US Pat. 6,773,099) in view of Pollacek et al. (US Pat. 5,040,002).

Inoue et al. disclose the basic features of the claimed invention were stated above but does not disclose a liquid cartridge comprising a check valve, which is provided between said liquid accommodating section and said communicating hole, for allowing atmosphere to flow from said communicating hole to said liquid accommodating section, and for inhibiting a liquid flowing from said liquid accommodating section to said communicating hole.

Pollacek et al. disclose in Figure 1 an ink cartridge comprising a check valve (38), which is provided between said liquid accommodating section (22) and said communicating hole (32, 42), for allowing atmosphere to flow from said communicating hole to said liquid accommodating section, and for inhibiting a liquid flowing from said liquid accommodating section (22) to said communicating hole (32, 42).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Pollacek et al. in the Inoue et al. liquid container for the purpose of regulating the underpressure in an ink reservoir to prevent leakage of ink from a print head.

Allowable Subject Matter

Claims 2-3 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses a liquid cartridge comprising a coil spring for urging said atmospheric valve toward said communicating hole in order to seal said communicating hole in the combination as claimed.

Claim 4 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses a liquid cartridge comprising a sealing part, which is urged in order to seal around said communicating hole; and a shaft part, which extends from said sealing part, is inserted into said communicating hole and touches said communicating hole internally at a plurality of places, wherein a gap is formed between said shaft part and said communicating hole in the combination as claimed.

Claim 5 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses a liquid cartridge comprising a film that is formed at a part of said liquid cartridge, with which a contact member of said liquid ejecting apparatus is in contact, and said atmospheric valve is moved by being pushed by said contact member via said film having a flexure in the combination as claimed.

Claims 6-9 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses a liquid cartridge comprising a liquid keeping part, which is provided at a position closer to atmosphere than said communicating hole, below said atmospheric valve and said communicating hole, for keeping a liquid, which flows out of said communicating hole in the combination as claimed.

Claim 12 would be. This claim would be allowable because none of the prior art references of record discloses a liquid cartridge mounted while being in contact with a part of a


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liquid ejecting apparatus and turning around said liquid ejecting apparatus comprising an angle, by which a liquid cartridge turns around said liquid ejecting apparatus in order that an atmospheric valve is in contact with a contact member of a liquid ejecting apparatus taking a point at which said liquid cartridge turns around said liquid ejecting apparatus as an axis, is smaller than an angle, by which said liquid cartridge turns around said liquid ejecting apparatus taking said point as an axis in order that said supply valve is in contact with said liquid supplying needle in the combination as claimed.

Claims 13-18 would be allowable. These claims would be allowable because none of the prior art references of record discloses a liquid cartridge mounted while being in contact with a part of a liquid ejecting apparatus and turning around said liquid ejecting apparatus comprising a contact part between said atmospheric valve and said contact member being provided at a position more closer to a point, at which said liquid cartridge turns around said liquid ejecting apparatus, than said liquid supplying part in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (703) 872-9306.



ANH T. N. VO
PRIMARY EXAMINER
July 1, 2005